

REMARKS/ARGUMENTS

The present amendment is submitted in an earnest effort to advance the case to issue without delay.

Claim 11 has been amended by incorporating the 10% transmittance value found in claim 17. The latter has been canceled. Further, claim 1 has been amended to specify wall thicknesses contributed by the outer and inner layers recited by claim 23. The latter has been amended to now define the thicknesses in the narrower range of from 5 to 10%. New claims 27 and 28 have been introduced to recite wall thicknesses for the middle layer. Support for all the wall thickness changes can be found in the specification at page 13, lines 11-18. The term "post-consumer recycled resin" is found at page 13, lines 27-28.

Claims 11, 14-17, 20-21 and 23 were rejected under 35 U.S.C. § 102(b) as anticipated by Takahashi et al. (U.S. Patent 6,329,465 B1). Applicants traverse this rejection.

Fundamental to the present invention is that the claimed bottle has walls sufficiently clear for a consumer to visibly see liquid contents in the bottle. Often the liquid contents are colored. This adds to the aesthetic appeal. Also color provides a cue to a particular variant of the detergent or other liquid being purchased.

Not only must the bottle be transparent or translucent, but it must be sufficiently strong to withstand rugged handling. Strength has been provided through use of virgin resins. These resins are particularly effective in the outer and, to a lesser extent, in the innermost layers of the bottle wall. An assist to transparency/translucency is provided

by use of a metallocene polyethylene virgin polymer in the outer layer. Metallocene polyethylene virgin polymer while providing light transmittance still needs to be strengthened.

Post-consumer recycled resins are known to impart strength. What was surprising to applicant was that recycled resin placed in a middle layer, and in relatively large amount would not substantially interfere with light transmittance. Claim 11 recites that the outer and inner layers are each no thicker than 20% of the total wall thickness. This leaves at least 60% wall thickness for the middle layer. Post-consumer recycled resin is claimed to be at least 25% by weight of the middle layer. This amount of post-consumer recycled resin is indeed a very substantial constituent of the wall.

Intuitively the skilled technician would be hesitant to incorporate any significant amount of recycled resin. This resin is not known to have any appreciable light transmittance. Post-recycled plastics are mixtures of many materials and subject to impurities which could adversely affect light transmission properties. A good stew can easily be ruined in taste by a rotten onion. The same intuitive concern would be with post-consumer recycled resins.

Yet despite the potential (and likely presence) of some transmittance adverse components, applicant found that post-consumer recycled resins even in large amount would not interfere with the transparency/translucency of the bottle. Apparently the metallocene polyethylene polymer in the multi layer arrangement works well as an outer layer structuring plastic in combination with the much larger middle layer.

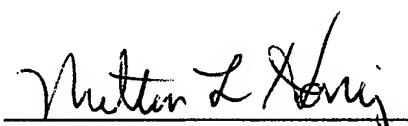
Takahashi et al. disclose possible use of recyclable materials. Attention was drawn to column 51, lines 4-19.

Unlike the present invention, the "recycling materials and scrap materials" are terms often associated with in-plant materials. These are not necessarily post-consumer plastics which have gone out to the public and been recollected. Yet even if the terms "recycling" and "scrap" were given their broadest connotation, use of recycled resin in very significant amounts is not taught or suggested. Neither is there any teaching or suggestion for placing the post-consumer recycled resins into the middle layer. Still further, there is no teaching or suggestion that the middle layer be the thickest.

Based on the foregoing considerations, Takahashi et al. would not render the instant invention obvious.

In view of the foregoing amendment and comments, applicant requests the Examiner to reconsider the rejection and now allow the claims.

Respectfully submitted,



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